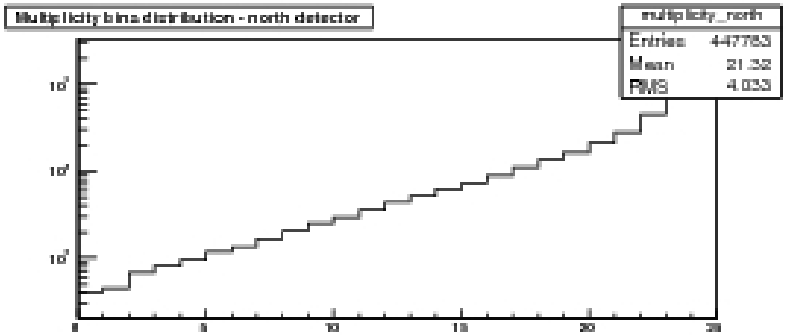
Diffractive J/Ψ Production

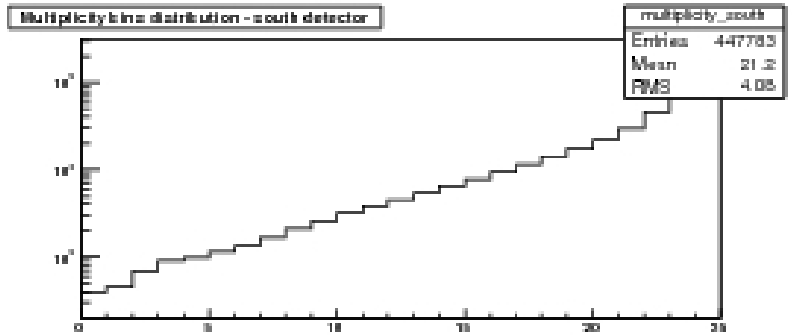
Update

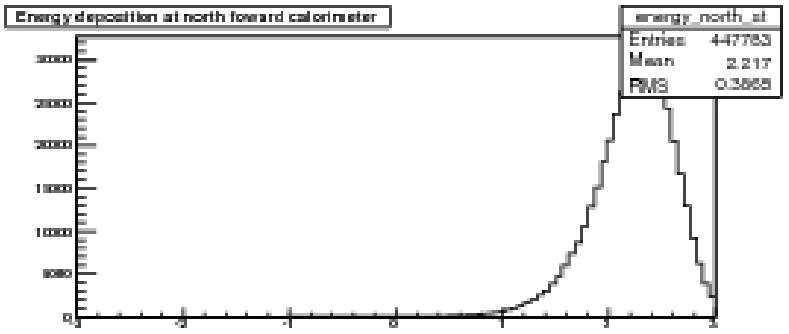
- Luminosity and Calorimeter information study
- Data Plots
- Monte Carlo Plots
- Next Steps

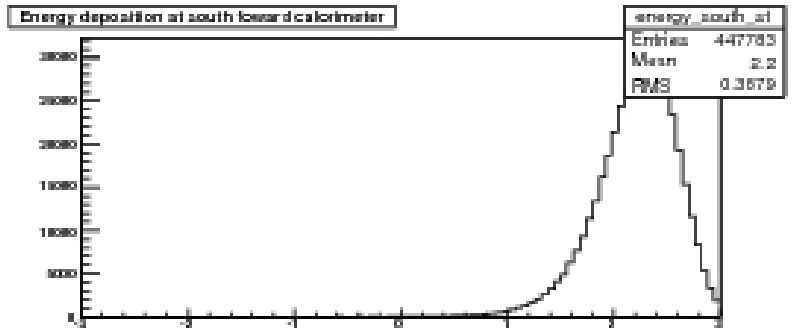
Ana Carolina Assis Jesus

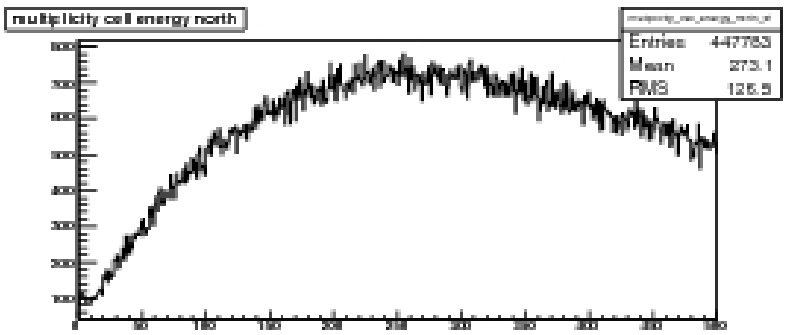
1-D Histograms (Data)

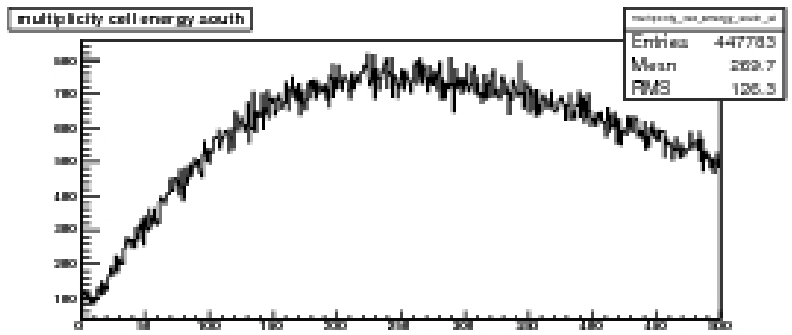




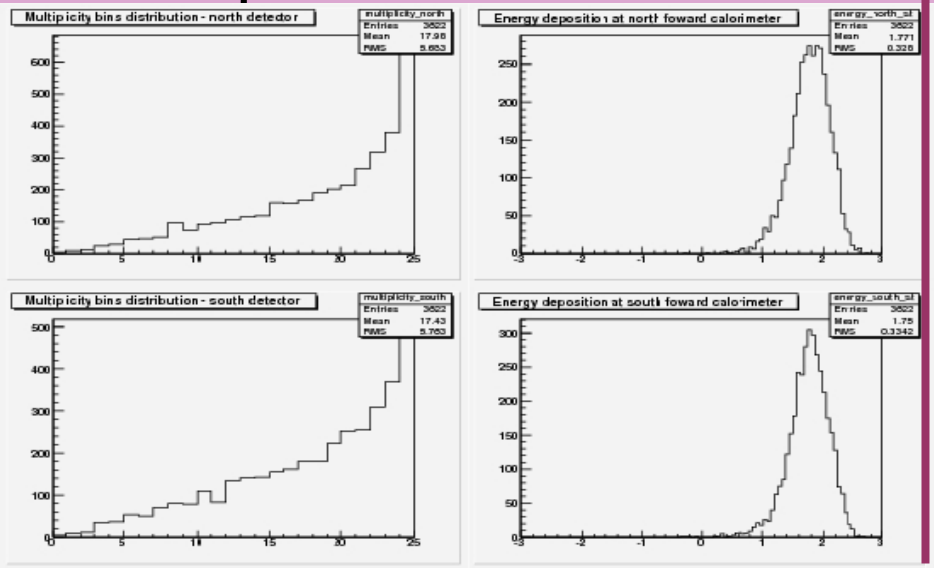




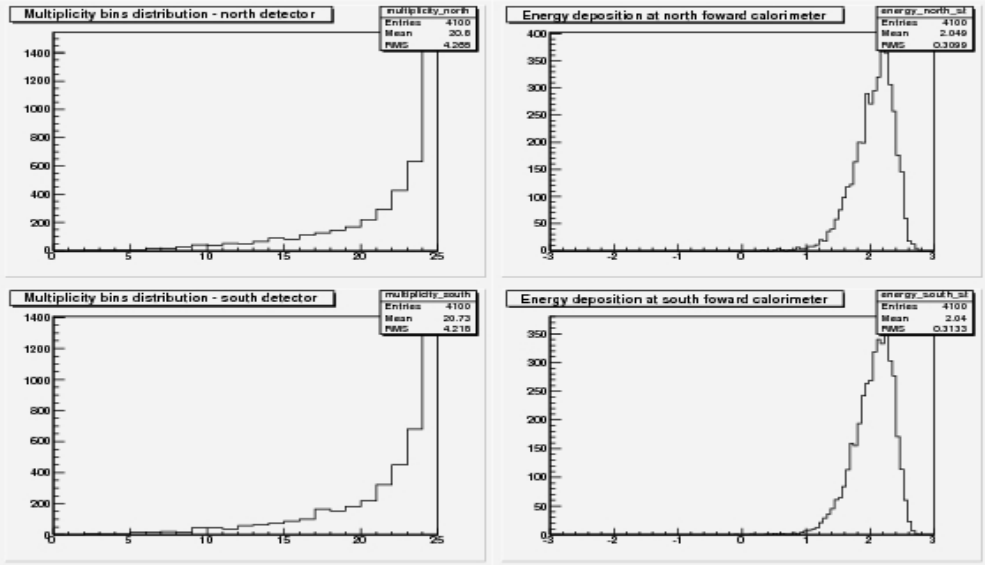


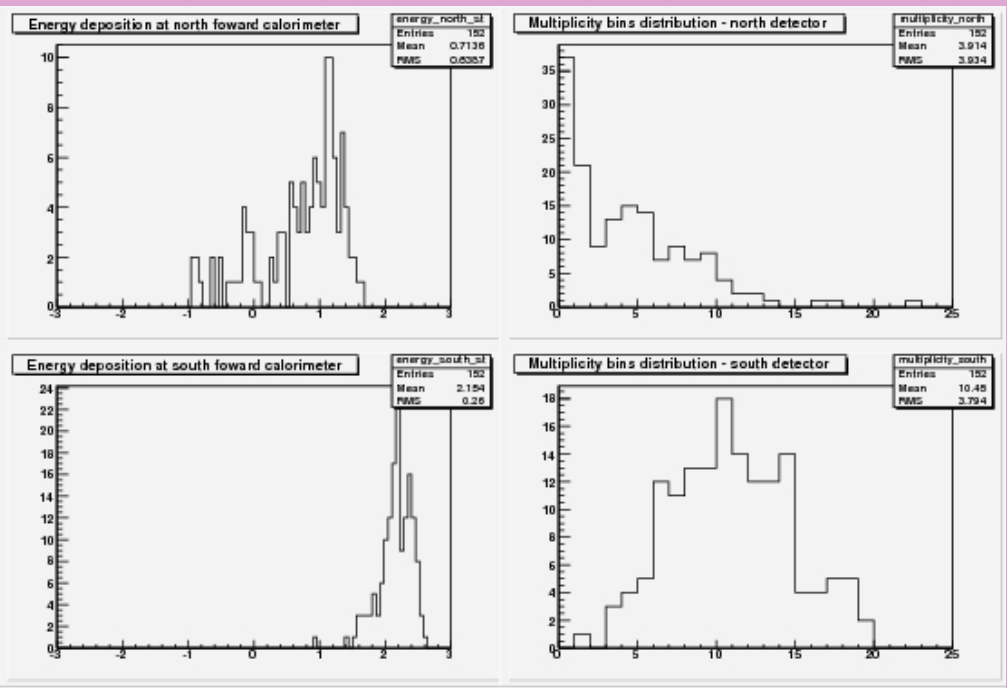


Prompt J/Ψ

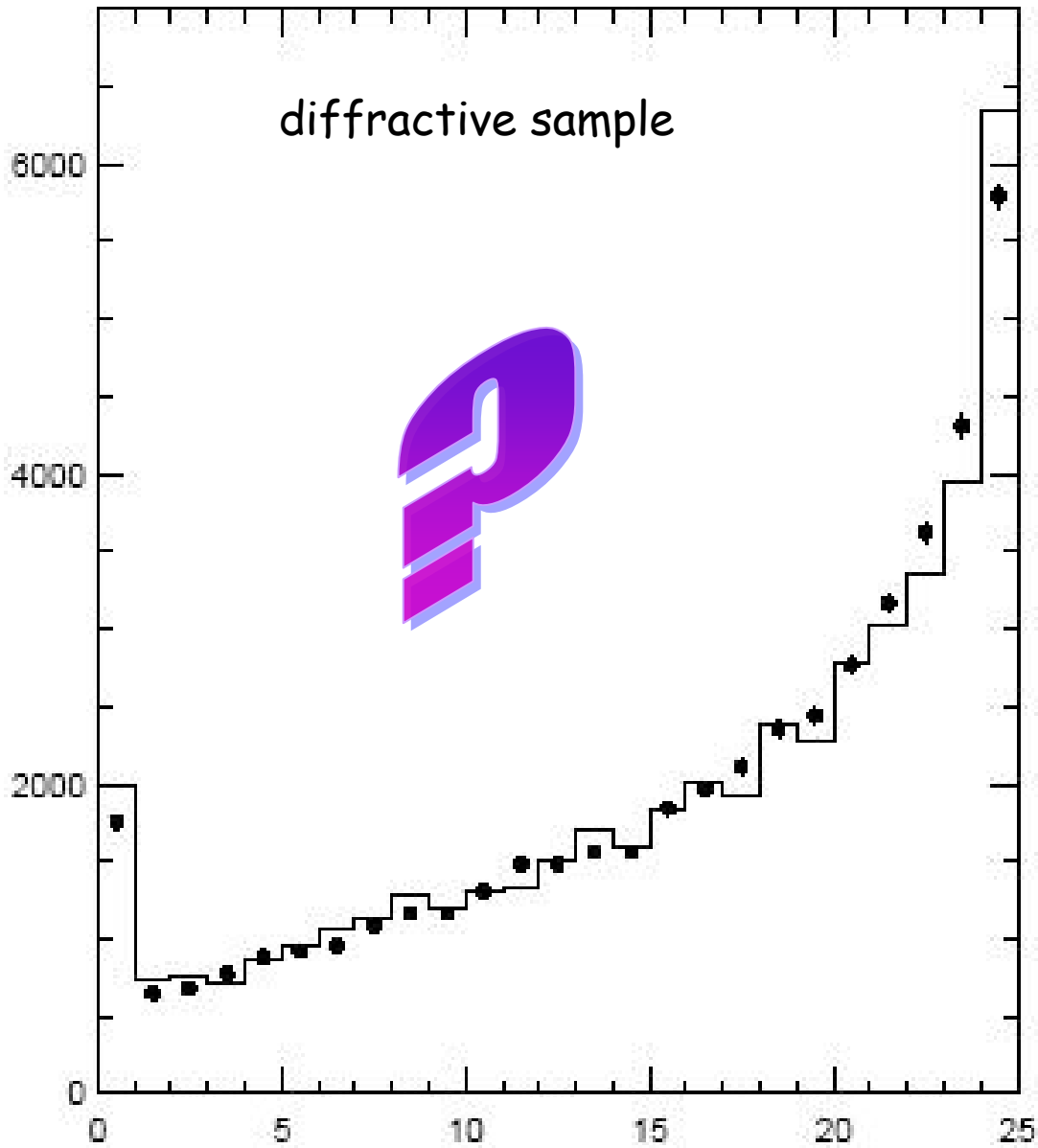


J/Ψ from B decay

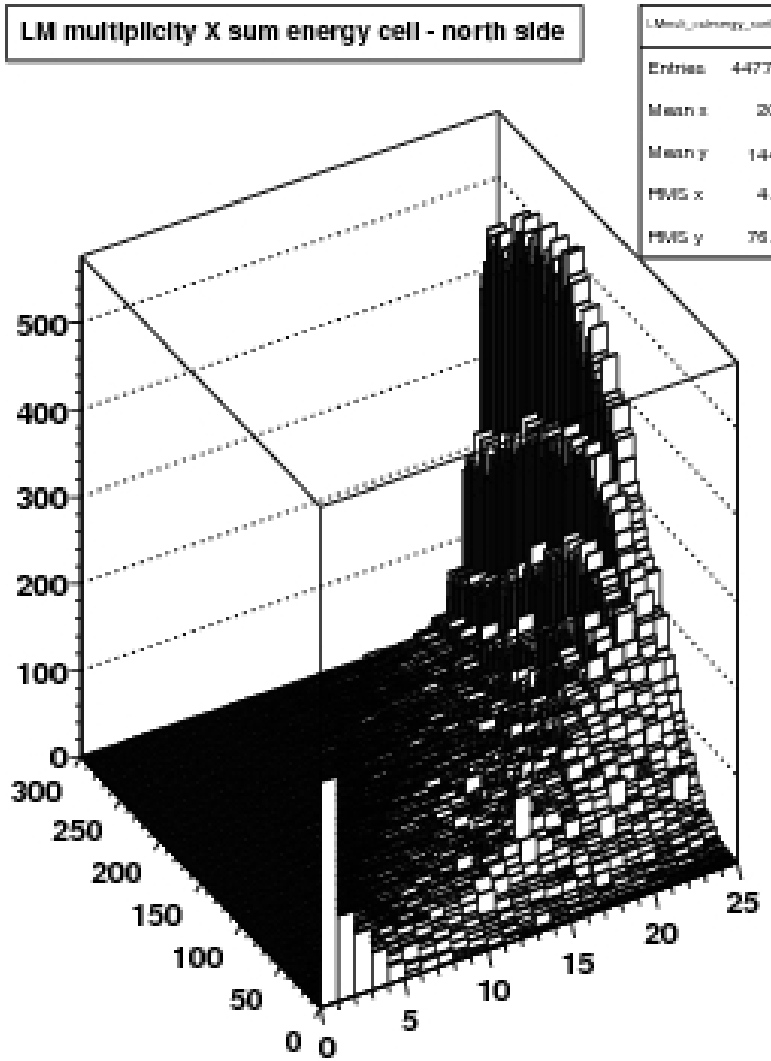


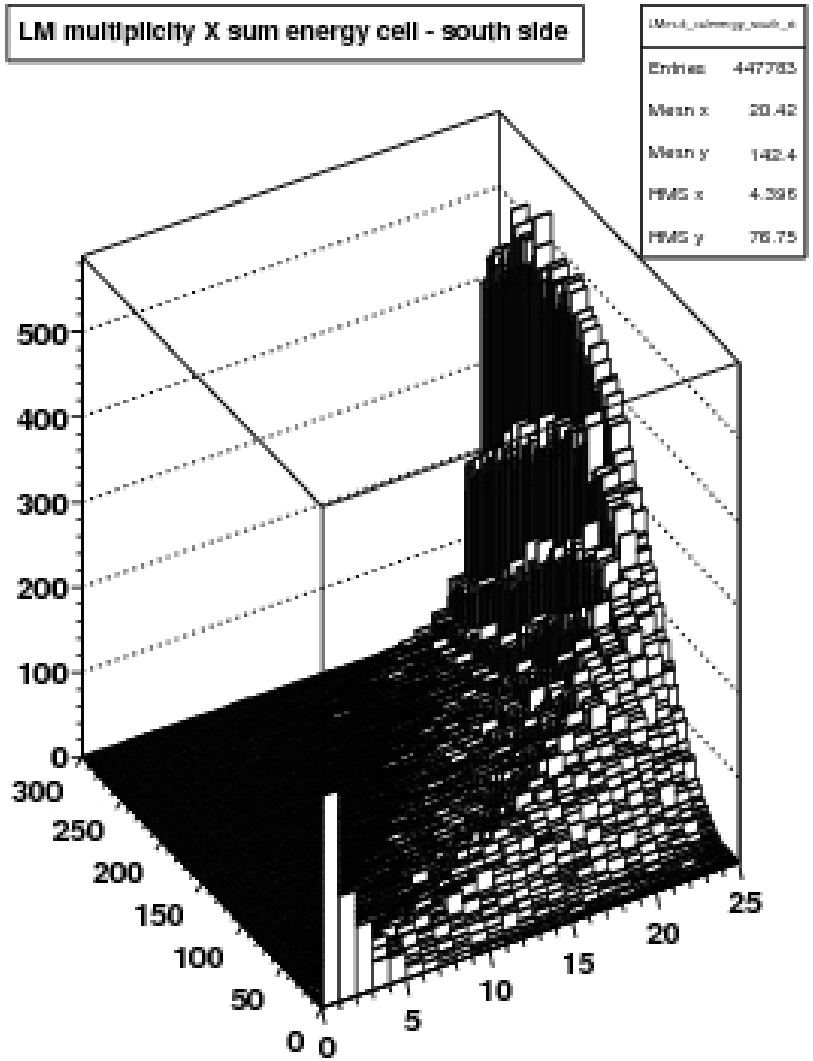


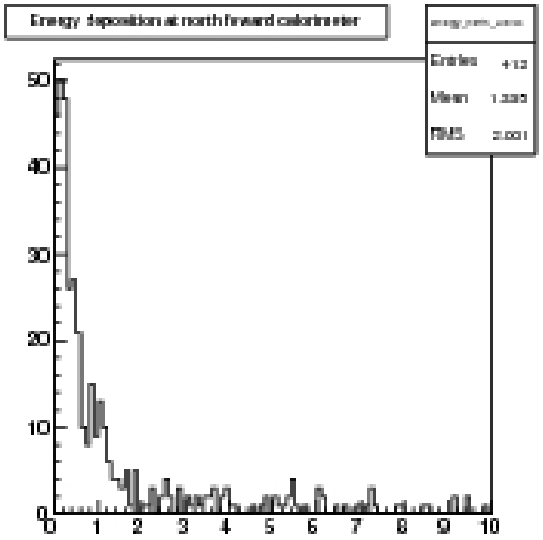
J/Ψ from B decay - diffractive

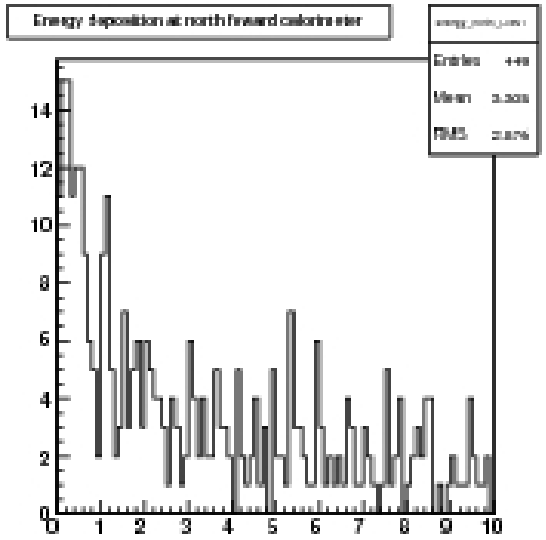

diffractive sample
?
6000
4000
2000
0
0
5
10
15
20
25

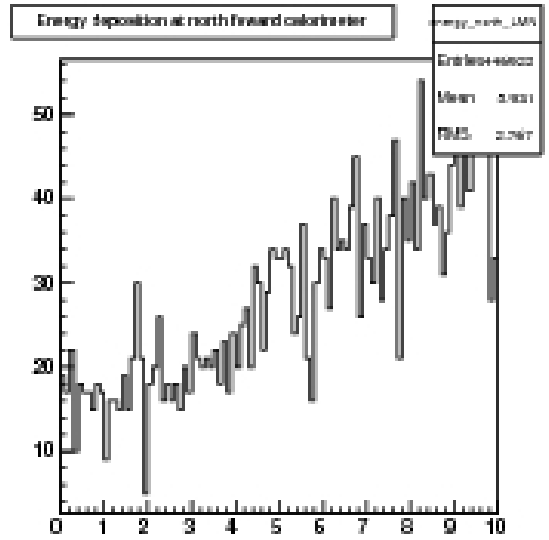
2-D Histograms (Data)

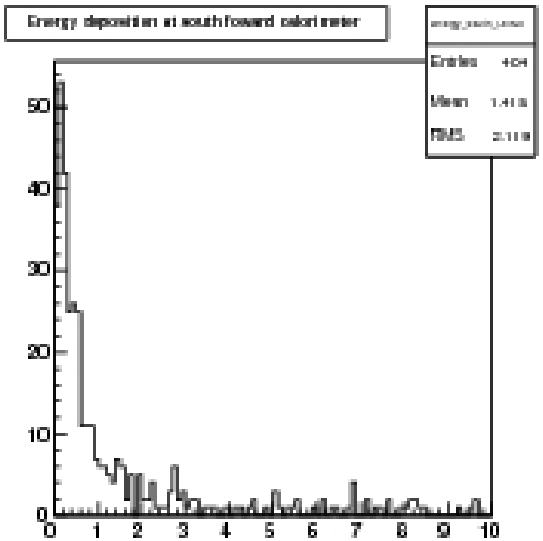


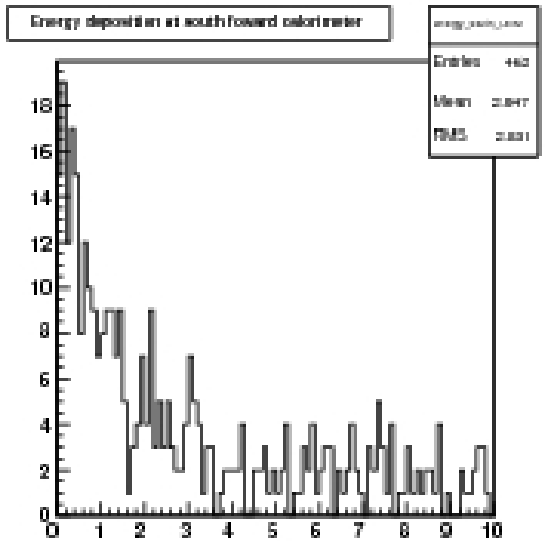


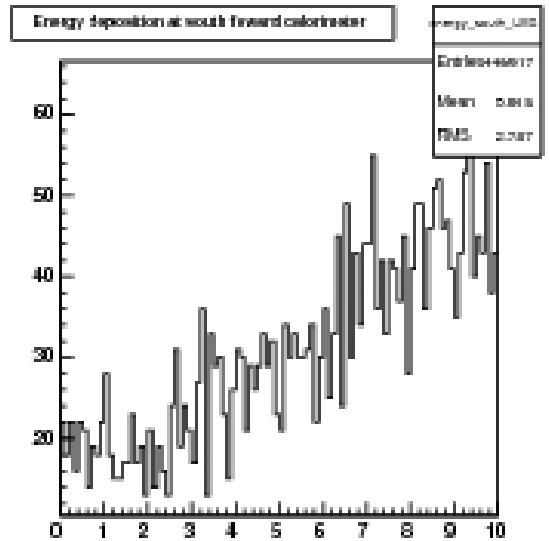

Energy deposition at north foward calorimeter
Entries 412
Mean 1.335
RMS 2.031


Energy deposition at north foward calorimeter
Entries 449
Mean 3.328
RMS 2.876

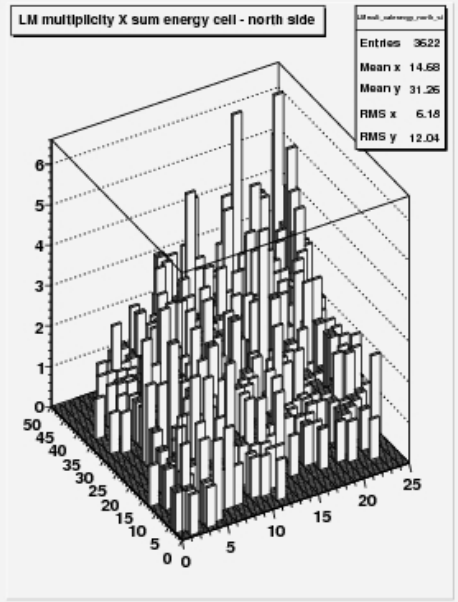

Energy deposition at north foward calorimeter

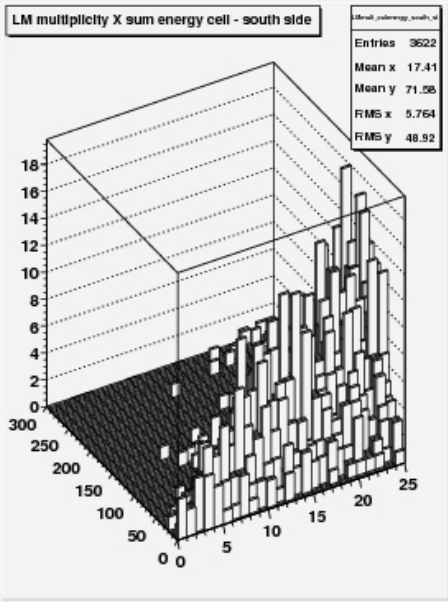

Energy deposition at south foward calorimeter
Entries 404
Mean 1.418
RMS 2.118


Energy deposition at south foward calorimeter
Entries 462
Mean 2.847
RMS 2.831

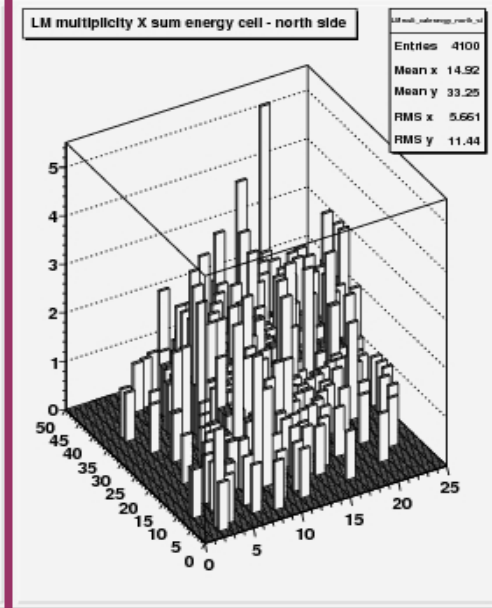

Energy deposition at south foward calorimeter

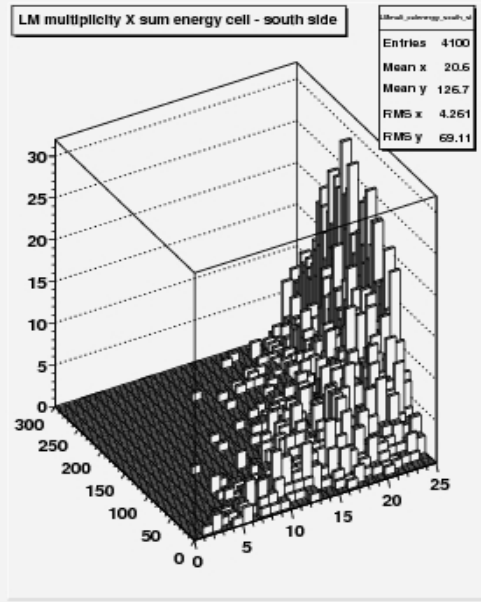
Prompt J/Y

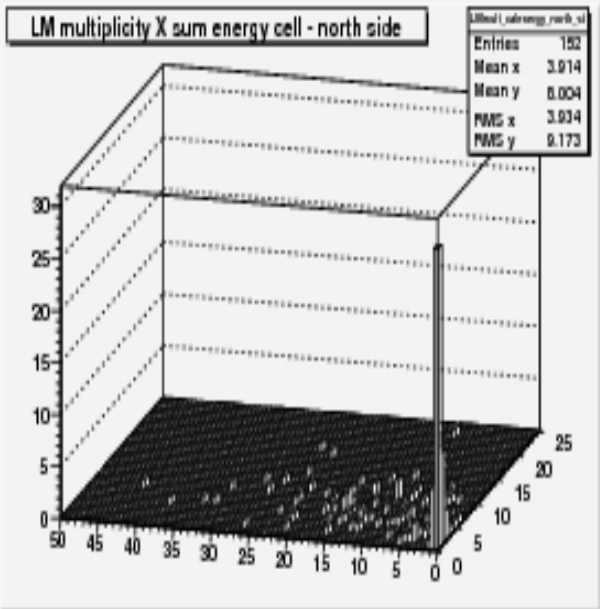


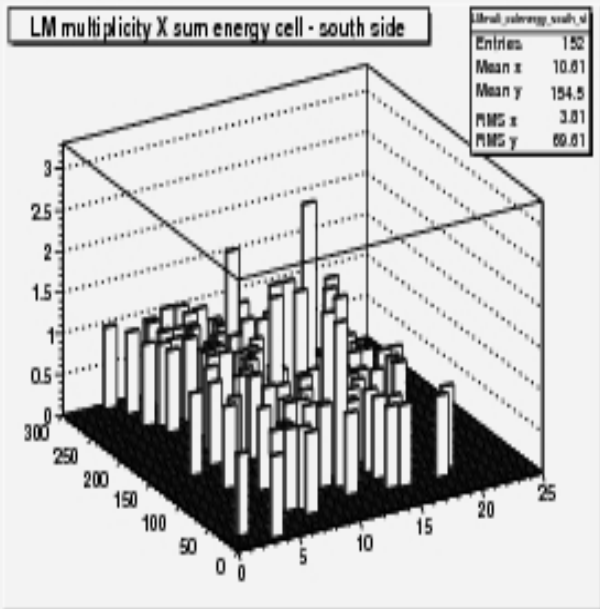


J/Ψ from B decay



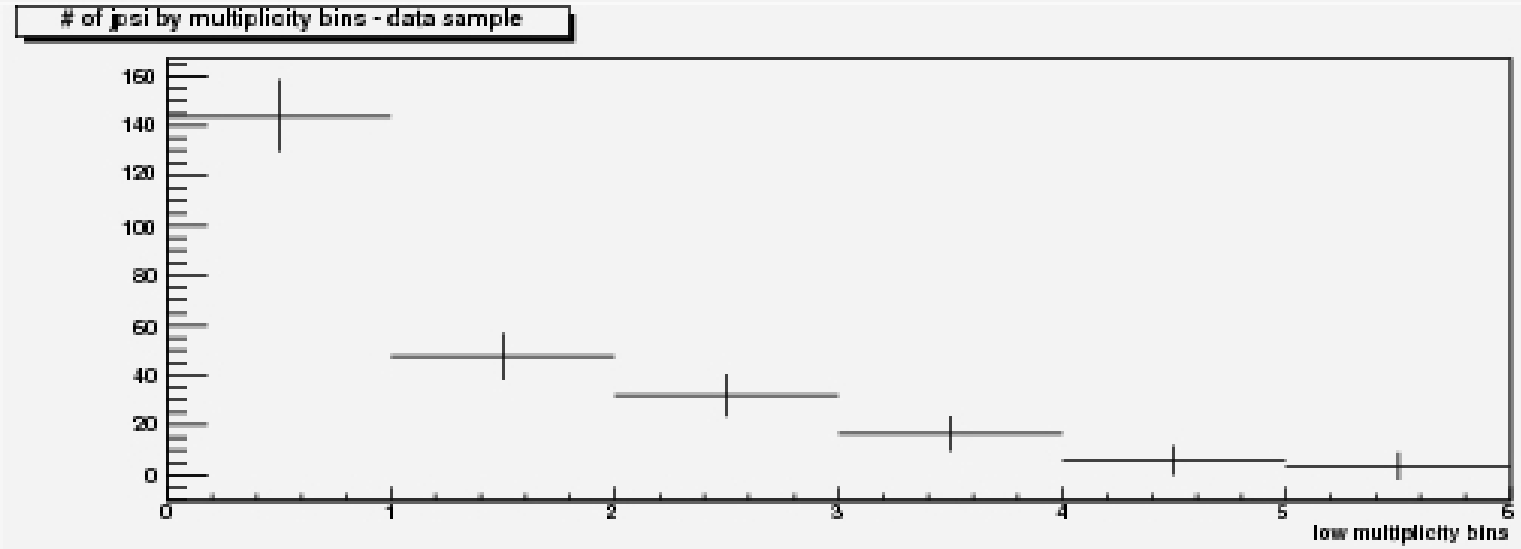


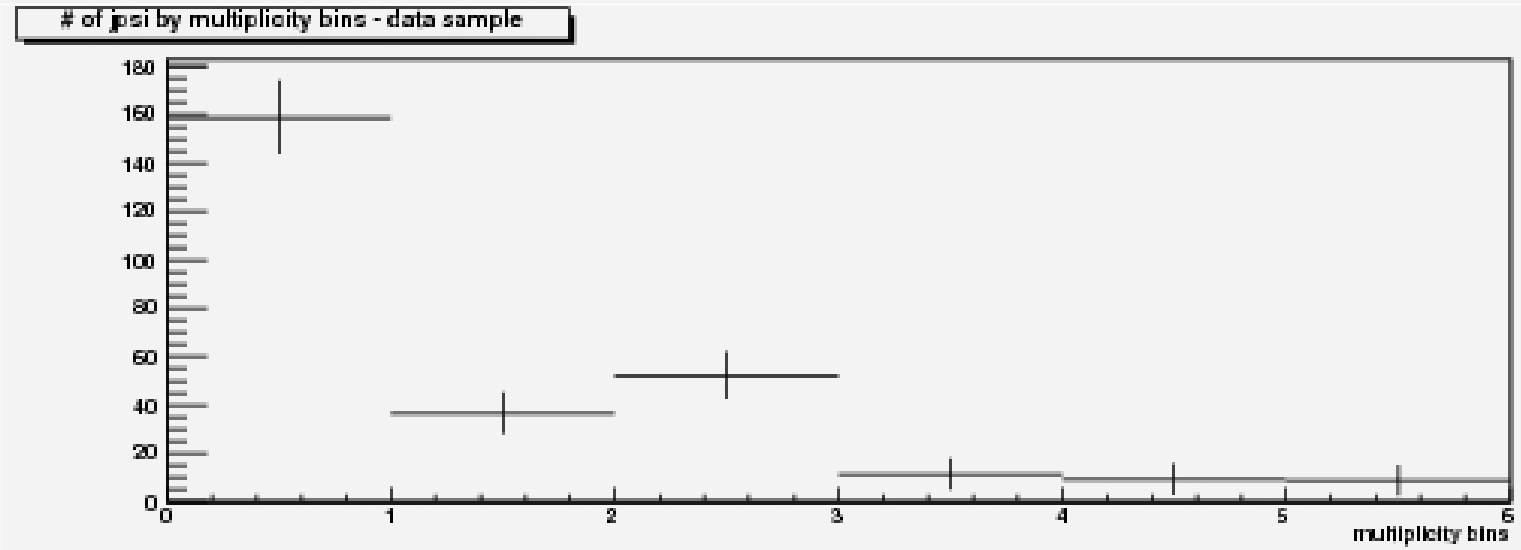




J/Ψ from B decay - diffractive

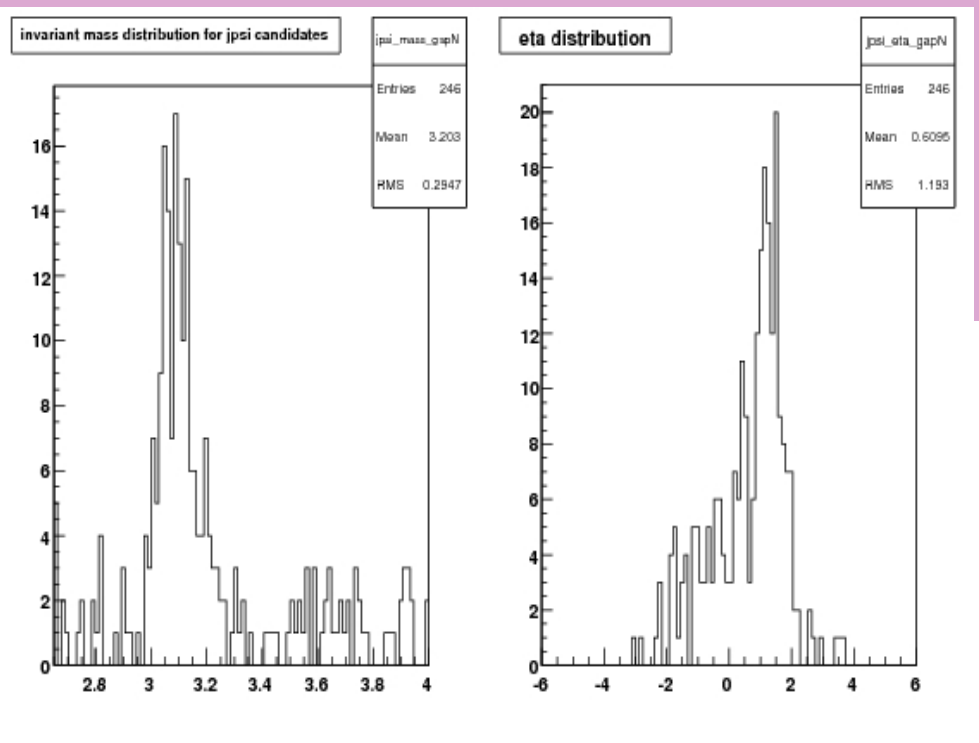
Looking at the low LM multiplicity in the first calorimeter energy bin: (sum_energy)<1GeV

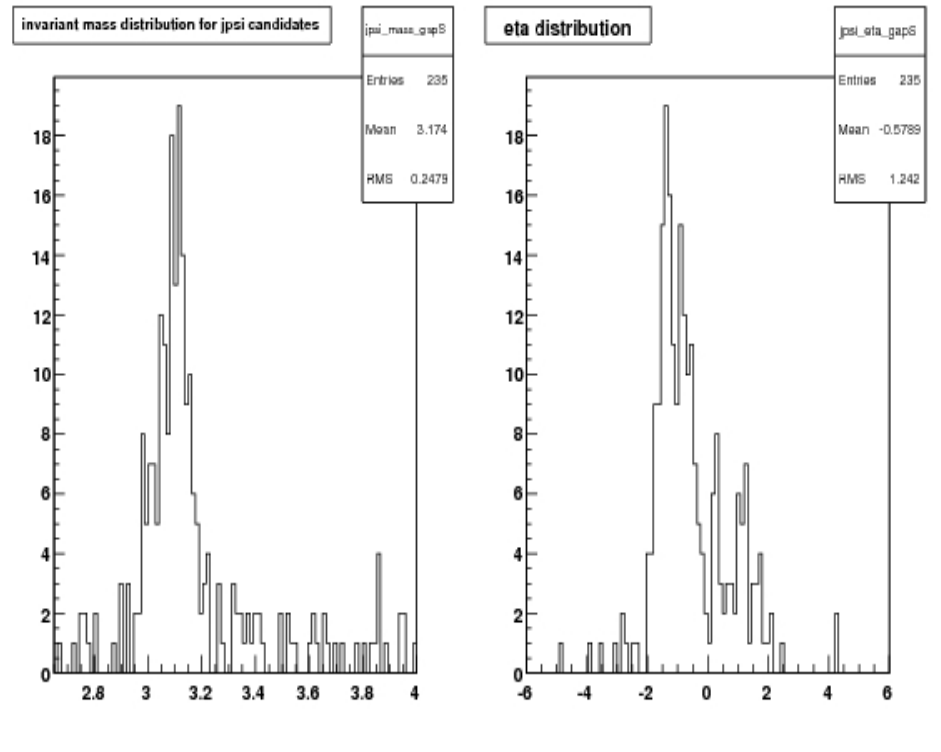




Gap Definition

LM==0 (while the other side has hits) && (sum_energy)<1GeV





Next Steps

- Eta bins study;
- Luminosity bins study;
- Use significance of Lengh Decay to separate prompt from B decay production